CHARACTERIZATION AND DIFFERENTIATION OF *"VINHOS VERDES"* GRAPE VARIETIES BY TERPENIC COMPOUNDS

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Wines with Appellation of Origin "*Vinhos Verdes*" are elaborated in very full area in Portugal, the broadest of Europe. White wines, characterized by the freshness and the floral and fruity flavours, have acquired already international recognition; red wines are known mainly by the colour and marked astringency and accompanied regional gastronomy basically. 7 white varieties and 8 red varieties for making of these wines are recommended.

This study has established the aromatic profile of 3 white grape varieties (*Alvarinho, Loureiro,* and *Avesso*) and 2 red varieties (*Azal-tinto* and *Vinhão*) respecting the terpenic compounds present either in free and in glycosylated fraction of juice. Viticultural and oenological aspects were also considered in the characterization of vines and musts. 17 compounds in the free form and 21 in the glycosylated form were identified and quantified.

Loureiro variety is characterized by important levels of linalool in both fractions, above the odour perception threshold; by the contrary, *Alvarinho* and *Avesso* varieties do not contain compounds above this perception threshold. For *Alvarinho* prevails the geraniol followed by linalool while *Avesso* only has, in much low contents, geraniol, nerol and citronellol; red varieties do not contain terpenic compounds. *Loureiro* and *Alvarinho* are still the richer varieties with regard to the glycosylated fraction; linalol and 3,7-dimetil1,5-octadien-3,7-diol have equivalent concentrations, being linalol around the odour perception threshold; *Avesso* does not contain linalol. The isomers (*Z*) and (*E*) of 8-hydroxylinalool seem to differentiate white varieties; they are similar for *Loureiro*

but the (*Z*) isomer prevails for *Avesso* and especially for *Alvarinho*; *Avesso* has more balanced distribution of the terpenic compounds. *Azal-tinto* contains only α-terpineol, nevertheless on the level of *Loureiro*, and *Vinhão* has a distribution more balanced but the contents are very weak.

The preliminary results show that the profile in terpenic compounds varies to a significant degree for the studied grape varieties and that, as one knew it already empirically, the white varieties are richer than red varieties, especially *Loureiro*, known already like aromatic. Climatic conditions do not influence the aromatic profile.